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Re: Shore Medical Center at Chestertown  
2015 Action Plan  
Standard Operating Procedures  
Project No: 14004.00

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The Ivey-sol® push-pull remediation events at each monitoring well location, within the three (3) priority zones, would generally follow a stepwise approach as listed below:

1. Preparation of a 0.11 % by volume Ivey-sol® 106 formulation for injection (i.e., mixing five (5) gallon pail of Ivey-sol® 106 into 275 gallons of clean water).
2. Daily gauging of MW-19, MW-20, MW-21, and MW-35 will take place to ensure the absence of free product south of Brown Street. Should measurable free product be detected, the free product will be removed via pumps, sorbent pads, or a combination thereof.
3. Daily spot checks of the MyCelx® Filter Treatment System will be conducted to ensure continuous operation within the parameters dictated by the equipment vendors and to ensure consistency in meeting effluent discharge limits.
4. Prior to injection, the monitoring wells within the active Priority Zone will be gauged.
5. Inject the diluted Ivey-sol® into the subject monitoring well location(s).
6. Allow a post injection 'Residence Time' of approximately forty-eight (48) hours to pass. However, as noted in the MDE approval letter, MW-20 may be utilized but only with a twenty-four (24) hour 'Residence Time' and with the pump and treat system fully operational.
7. Prior to extraction, the monitoring wells within the Priority Zone will be gauged.
8. Commence extraction efforts. Collect samples from select monitoring wells within the first half-hour of extraction for analysis of TPH-DRO. Extract the groundwater from the monitoring well location removing three (3) to five (5) times the volume injected, and/or when the Ivey-sol® field screening test indicates that the majority of Ivey-sol® surfactant from the injection has been removed.
9. The extracted groundwater is then treated and disposed via the onsite MyCelx® Filter Treatment System.
10. Review the TPH-DRO extraction results collected in Step 8. If concentrations indicate, proceed with additional push-pull applications.

11. On a weekly basis (by close of business Friday), the Technical Team will provide MDE and the Town with updates to include a summary of injection/extraction events, summary of various sampling/gauging data reported, general observations, laboratory data (if available), and a plan for the week ahead. These reports will be used to provide sufficient data on the status of the project in order to provide a cumulative assessment of the clean-up for each Priority Zone. When the technical team believes that a Zone has been remediated, the cumulative weekly reports will provide documentation to support approval from MDE that the Technical Team may move on to the next Priority Zone. These weekly reports will provide the evidentiary information and documentation required to support this request.
12. On a monthly basis, for each monitoring well that has undergone an Ivey-sol® application during that month, collect and analyze for TPH-DRO.
13. Based on a review of laboratory analysis during extraction activities, the frequency of Ivey-sol® push-pull application events can be increased or decreased accordingly.
14. Continue to perform the monthly and quarterly monitoring and reporting to MDE with copies to the Town consistent with the ongoing sampling and monitoring that has been performed over the past several years.
  - a. Monthly monitoring, sampling, and testing of eleven (11) targeted monitoring wells (MW-15, MW-16, MW-19, MW-20, MW-24, MW-33, MW-34, MW-35, MW-48, MW-49, and MW-50) for the presence of Total Petroleum Hydrocarbons – Diesel Rand Organics (TPH-DRO) using EPA Method 8015.
  - b. Quarterly sampling all monitoring and recovery wells for the presence of TPH-DRO using EPA Method 8015 and Volatile Organic Compounds (VOC's) including oxygenates, using EPA Method 8260B.

Notes:

- Notwithstanding the above, the underpinning of the plan was to define the end points. Depending on the results, the extent and duration of the push-pulls can be expected to change as required to be able to dial-in on the required levels of surfactant application and extractions. If the end-points are reached sooner than expected the team will report this to MDE and request that the cleanup in this area be completed to move on to the next Priority Zone.
- In the course of any seven (7) to nine (9) day period and for any individual well up to three (3) push-pull events can be expected. Our anticipated schedule for these events would include an injection late Friday with an extraction early Monday morning. Although this may slightly exceed 48 hours it is certainly within a reasonable definition of a two day event. Other injections/extractions would occur throughout the week. The hydraulic control will remain in operation for the entire 2015 Action Plan process.